Promoting Equity in Public Health: Adressing Healthcare Utilization Disparities in Indonesia

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ABSTRACT

***Background**: The implementation of Indonesia's National Health Insurance (JKN) has expanded healthcare access. As of December 31, 2024, JKN coverage had reached 98.45%, yet disparities persist across socioeconomic groups and geographic regions. These disparities contribute to unequal service quality, low utilization, and financial burdens among low-income households. **Objective**: This study identifies determinants of disparities in healthcare utilization in Indonesia using Andersen's Behavioral Model and provides an evidence base for policymakers. **Methods**: A systematic review was conducted following PRISMA guidelines. Searches of CrossRef, Scopus, and PubMed (2015–2025) identified studies on healthcare utilization and disparities in Indonesia. Eligible articles were screened in Covidence and thematically synthesized using Andersen's Behavioral Model to classify determinants into predisposing, enabling, and need factors. **Results**: Enabling factors, such as socioeconomic status, insurance ownership, and geographic access, were the strongest determinants, compared with predisposing factors (age, sex, marital status, and educational background) and need factors (self-rated health, chronic conditions, perceived healthcare needs). High health needs did not always lead to service use, particularly among low-income and remote populations. Financial protection alone is insufficient without improvements in health literacy, equitable workforce distribution, and stronger primary care. **Conclusion**: Although JKN has expanded access, disparities remain. An integrated approach is needed to strengthen primary care, ensure equitable health worker distribution, improve health literacy, and enhance geographic access. These actions can shift JKN's focus from coverage expansion to equitable service access, supporting Indonesia's progress toward Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs).*

***Keywords**: Health Equity, Healthcare Disparities, Healthcare Utilization, Indonesia, National Health Insurance*

INTRODUCTION

Due to its vast archipelagic geography and position as the world's fourth most populous nation, Indonesia continues to struggle with unequal access to and utilization of healthcare services, creating challenges in the pursuit of health equity. Despite notable economic growth and ongoing health system reforms, access to essential health services remains unevenly distributed across the archipelago. Economic, geographic, and supply-side factors such as poverty, rural residence, inadequate health infrastructure, and workforce maldistribution continue to limit healthcare access for millions, particularly in remote and disadvantaged regions like Papua, Maluku, and Nusa Tenggara (Muharram *et al.*, 2024). Socioeconomic status, education, and occupation are strongly associated with healthcare utilization, with poorer, less educated, and rural populations facing greater barriers (Swarjana *et al.*, 2020). Urban residents are more likely to use both outpatient and inpatient services, while rural and eastern populations often rely on traditional medicine or forgo care entirely due to cost, distance, or lack of available facilities (Laksono *et al.*, 2024).

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

These disparities are further exacerbated by the uneven distribution of health professionals and facilities, with specialists and dentists concentrated in urban centers (Hendrartini and Aristianti, 2025). The consequences of these disparities are significant, including higher rates of preventable morbidity and mortality, lower utilization of maternal and child health services, and persistent gaps in health outcomes between regions and socioeconomic groups. Addressing these inequalities in healthcare access is essential for Indonesia to meet its national and global commitments, particularly those related to universal access to healthcare and broader global development targets (Mulyanto, Kunst and Kringos, 2019).

Indonesia's health system has undergone major reforms over the past decade, most notably the launch of the National Health Insurance Program, or Jaminan Kesehatan Nasional (JKN), in 2014. The program aims to strengthen financial protection and ensure equitable access to healthcare by reducing out-of-pocket expenditures and expanding coverage to the poor and those working in the informal sector (Novita and Hafidz, 2022). As of December 31, 2024, JKN membership had reached 278.1 million people, representing 98.45% of Indonesia's total population.

This achievement met the 2024 coverage target stipulated in Presidential Regulation No. 36/2023, which set the goal at 98% (DJSN, 2024). The program has contributed to measurable improvements in outpatient and inpatient service utilization, particularly among low-income groups (Rahmawati and Hsieh, 2024). However, significant challenges remain, including regional disparities, socioeconomic inequities, supply-side constraints, and cultural and informational barriers. Recent policy innovations, such as sub-national financing schemes, digital health initiatives, and targeted interventions for vulnerable populations, have shown promise in addressing some of these gaps, although their long-term equity impacts remain underexplored (Novianti *et al.*, 2023).

In order to examine the factors contributing to inequalities in healthcare utilization across Indonesia, this review employs Andersen's Behavioral Model as its conceptual foundation. Originally developed in the 1960s, the model has guided much of the empirical work on healthcare utilization. It proposes that people's use of medical services is influenced by a combination of predisposing, enabling, and need factors. Predisposing factors include demographic characteristics, social structure, and personal beliefs about health. Enabling factors refer to the resources that facilitate or hinder access, such as financial capacity, health insurance coverage, travel time, and the availability of healthcare services. Need factors consist of perceived or evaluated health status and the presence of illness or symptoms.

Recent adaptations of Andersen's model in Indonesia have incorporated regional, cultural, and infrastructural variables to better capture the country's diversity and the unique challenges faced by different population groups (Sri Wahyuni *et al.*, 2024). This theoretical lens not only enables a more nuanced understanding of utilization disparities but also guides the design and evaluation of interventions aimed at promoting equity in healthcare access and outcomes.

METHODS

At the review stage, the researchers followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, and the quality of the included studies was assessed using a custom critical appraisal checklist adapted from the Cochrane and JBI tools.

Inclusion and Exclusion Criteria

The authors collectively developed detailed eligibility criteria prior to initiating the systematic review. The review focused on studies examining healthcare utilization and equity in Indonesia. It included academic articles published from January 2015 to September 2025, limited to English-language papers that had undergone peer review. Eligible studies involved Indonesian populations; examined healthcare utilization and its determinants; compared groups by socioeconomic status, gender, or regional location; or reported outcomes related to equity, access, or disparities. Both original research articles and review papers were included.

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

Search Strategy

A comprehensive search strategy was conducted using Publish or Perish software to access the CrossRef, Scopus, and PubMed databases. Search terms combined concepts of healthcare access, utilization, and disparities in Indonesia, for example: ("healthcare utilization" OR "health care utilization" OR "health service utilization") AND (disparities OR disparity OR inequality OR inequity) AND Indonesia. Medical Subject Headings (MeSH) were applied where available, and all search terms were reviewed by a public health librarian. This approach ensured a sensitive and comprehensive identification of studies on healthcare utilization and equity in Indonesia.

Guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, this review applied a structured approach to screening and selecting eligible studies. The search initially yielded 83 articles (CrossRef n = 52; Scopus n = 21; PubMed n = 10). Titles and abstracts were imported into Covidence, which was used to identify and remove duplicates and to support the screening process. One reviewer independently assessed titles and abstracts for eligibility, and any discrepancies were resolved through consensus. Full-text review was conducted for 18 potentially eligible studies, and six were excluded due to an incorrect population focus. Following the screening process, 12 publications met the predefined inclusion criteria and were included in the final analysis.

Risk of Bias Assessment

Quality appraisal was conducted in Covidence using a custom risk of bias framework developed specifically for this review. The framework was adapted from established tools such as the Cochrane and JBI checklists, and consisted of four domains: representativeness of the sample, source and quality of the data, definition and measurement of variables, and validity of outcome measures. This approach was applied because the included studies were mainly observational and secondary data analyses, for which standardized RCT-based tools (e.g., Cochrane RoB 2.0) were not directly applicable.

The Cochrane RCT classifier feature in Covidence was activated only to assist during the screening stage, helping identify potential randomized trials. However, the final quality assessment relied on the custom framework, ensuring that methodological rigor and contextual relevance were evaluated consistently across studies. This process enhanced transparency and comparability, supporting the credibility of the review findings and their implications for Indonesia's healthcare equity landscape.

Data Extraction

For each study, data were extracted into an evidence matrix containing variables such as the author's name, publication year, participant numbers, methodological design, key findings, and determinants of healthcare utilization. The included studies were then organized thematically using Andersen's theoretical perspective on healthcare utilization to classify determinants into predisposing, enabling, and need components. This analytical framework provided a structured basis for comparing determinants across studies and identifying the dominant influences driving disparities in healthcare utilization within the Indonesian context.

Registration and Timeline

This review protocol was registered in PROSPERO under the registration number CRD420251236263. Although the review progressed quickly, all methodological steps adhered to established standards to ensure transparency and rigor. The review was conducted within a clearly defined timeframe. The development of the research question, eligibility criteria, and initial search strategy began on September 17, 2025. Database searching across CrossRef, Scopus, and PubMed was conducted throughout late September, with the final search completed on October 21, 2025. Screening of titles, abstracts, and full texts occurred concurrently, and the final selection of eligible studies was completed by October 21, 2025. Data extraction and quality appraisal were carried out immediately following the screening phase, forming the basis for the synthesis presented in this review.

RESULTS AND DISCUSSION

The search strategy identified 83 records from three databases (CrossRef n = 52, Scopus n = 21, PubMed n = 10). After

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

removing duplicates using Covidence, 47 unique studies remained for screening. Of these, 18 studies advanced to the full-text assessment. After excluding six papers that did not align with the criteria, 12 studies met the eligibility requirements and were analyzed in this review (Fig. 1, PRISMA flow representation).

A systematic search across online databases identified 12 eligible studies on healthcare utilization and equity in Indonesia. All studies used cross-sectional designs and drew on large-scale national or regional survey data (**Riskesdas, IFLS, SUSENAS, and the ENHANCE survey**) or primary surveys conducted in specific areas. Table 1 summarizes the key characteristics and findings of the included studies. The studies consistently explored the determinants of healthcare utilization through the lens of Andersen's Behavioral **Model**, which categorizes factors into predisposing, enabling, and need dimensions. Most research focused on disparities in primary care, inpatient and outpatient utilization, maternal and child health services, and preventive care across different regions of Indonesia.

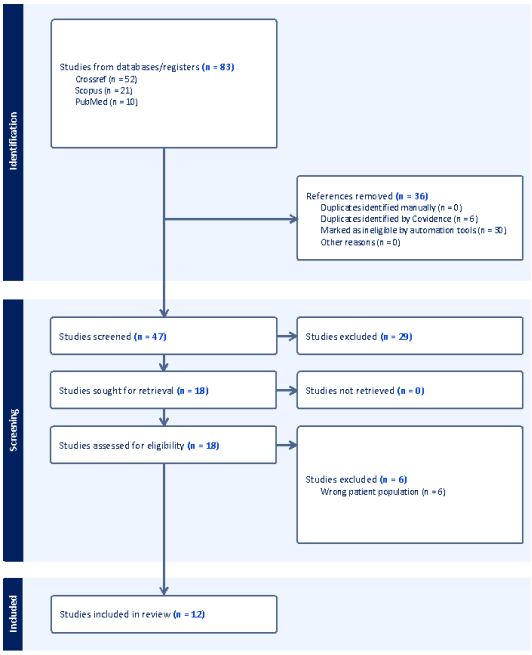

Fig. 1 PRISMA flow representation

Table 1. Results of literature review

Author, Year	Title	Methodology	Results	Determinants of Healthcare Utilization
Cheng et al. (2025)	Determinants of healthcare utilization under the Indonesian national health insurance system - a cross-sectional study	**Design:** Cross-sectional study **Analysis:** Multi-level logistic regression models **Sample Size:** 31.864 individuals from ENHANCE survei **Geographic Scope:** 10 of Indonesia's 34 provinces (representing 74% of Indonesian population)	Healthcare utilization largely equitable based on age/gender and health need, but inequities exist based on socioeconomic factors	**Predisposing Factors:** Age and Gender **Enabling Factors:** Education, Geographic, Wealth, and Insurance **Need Factors:** Self-rated health
Wulandari et al. (2025)	Socioeconomic disparities in primary healthcare ulitization in Eastern Indonesia	**Design:** Cross-sectional study **Analysis:** Chi-square, collinearity test, binary logistic regression; GIS mapping of utilization **Sample Size:** 57,827 respondents from 2018 Indonesian Basic Health Survei (≥15 years old) **Geographic Scope:** Eastern Indonesia (East Nusa Tenggara, Maluku, North Maluku, West Papua,	Socioeconomic differences were evident in the use of primary healthcare services in eastern Indonesia. Individuals from lower socioeconomic backgrounds showed a greater tendency to seek care at primary health facilities.	**Predisposing Factors:** Age, Gender, and Marital status. **Enabling Factors:** Socioeconomic status, Residence, Education, Occupation, Health Insurance, and Travel time. **Need Factors:** Health need

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

Author, Year	Title	Methodology	Results	Determinants of Healthcare Utilization
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(Mulyanto, Kunst and Kringos, 2019)	Geographical inequalities in healthcare utilisation and the contribution of compositional factors: A multilevel analysis of 497 districts in Indonesia	**Design:** Cross-sectional study **Analysis:** Multilevel logistic regression for associations and variability at province and district levels **Sample Size:** 649,625 adult individuals aged 18 or older **Geographic Scope:** 497 districts across 33 provinces in Indonesia **Data Source:** Basic Health Research Survey (Riskesdas) 2013	Geographical conditions, including the accessibility and spatial distribution of health facilities, can significantly contribute to inequalities across districts.	**Predisposing Factors:** Age, Gender, and Education **Enabling Factors:** Socioeconomic status, Residence, District-level resources, and Health insurance **Need Factors:** Self-reported illness
(Mulyanto, Kringos and Kunst, 2019a)	Socioeconomic inequalities in healthcare utilisation in Indonesia: a comprehensive survei-based overview	**Design:** Cross-sectional study **Analysis:** Age and sexstandardised prevalence rates (SPR), Rate Ratios, Relative Index of Inequality (RII), adjusted for self-assessed health **Sample Size:** 42,083 adults (aged ≥15 years old) from Indonesian Family Life Survey (IFLS5, 2014) **Geographic Scope:** 13 provinces (covering 83% population)	Socioeconomic gaps in healthcare use across Indonesia are especially pronounced in access to secondary and preventive services.	**Predisposing Factors:** Education, Age, and Gender **Enabling Factors:** Income, Geographic, and Health Insurance **Need Factors:** Adjusted with self-assessed health (SAH)
(Mulyanto, Kringos and Kunst, 2019b)	The evolution of income-related inequalities in healthcare ulitisation in Indonesia, 1993-2014	**Design:** Cross-sectional study **Analysis:** Prevalence rates for each type of healthcare by income quintile. Rate differences and rate ratios were also computed . The Relative Index of Inequality (RII) was used to estimate income-related inequalities, adjusted for age, sex, healthcare need (SAH), and geographical differences. **Sample size:** 14.202 individuals in IFLS1(1993) to 42.300 individuals in IFLS2 (2014)	Income-based disparities in healthcare use showed a declining trend up to 2007. The reduction persisted until 2014, but only for the utilization of inpatient services in both public and private facilities. This pattern may be attributed to reforms in the healthcare system that occurred alongside shifts in inequality levels within Indonesia's healthcare utilization.	**Predisposing Factors:** Age and Gender **Enabling Factors:** Income, Residence, and Health insurance **Need Factors:** Self-assesed health (SAH)

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

Author, Year	Title	Methodology	Results	Determinants of Healthcare Utilization
(Laksono *et al.*, 2024)	Education's role in primary healthcare ulitilization among older people in Indonesia	**Design:** Cross-sectional study **Analysis:** Chi-square and binary logistic regression. **Sample size:** 52,893 older people, all of whom were over 65 years old.	The findings indicated that older individuals with a primary level of education were 1.050 times more likely to access primary healthcare compared to those with no formal education (95% CI: 1.046–1.054). In contrast, older adults with secondary education were 0.643 times less likely to seek primary healthcare services than their counterparts without schooling (95% CI: 0.638–0.649). Similarly, those with higher secondary education were 0.378 times less likely to utilize primary healthcare than those lacking formal education (95% CI: 0.372–0.383).	**Predisposing Factors:** Age, Gender, Marital Status, and Education Level **Enabling Factors:** Wealth Status, Health Insurance, Time Travel to Primary Healthcare, and Residence Type **Need Factors:** Not explicitly categorized as 'need factors' in the results section, but the introduction highlights that older people are a vulnerable group with unmet care needs and chronic disorders, experiencing physical, psychological, social, and environmental limitations.
Anggraini, N. (2023)	Healthcare Access and Utilization in Rural Communities of Indonesia	**Design:** Cross-sectional study **Data sources:** In-depth interview using a questionnaire **Analysis:** Chi-square and logistic regression **Sample Size:** 500 household from rural villages in Central Java	The results emphasize the considerable challenges faced by rural populations in obtaining and utilizing healthcare services. These challenges stem from factors such as a limited number of healthcare professionals, insufficient health infrastructure, and generally low levels of income and education.	**Predisposing Factors**: Education, health literacy, and Social Structure **Enabling Factors**: Socioeconomic Status, Health Insurance, Healthcare Infrastructure, Healthcare Professionals, and Availability of Services **Need Factors**: Perceived Need: High rates of unmet healthcare needs were found in rural areas.
Anwar and Pujiyanto (2022)	Analysis of socioeconomic factors on healthcare facilities utilization for inpatient care in Indonesia	**Design:** Cross-sectional study **Data Sources:** SUSENAS 2020 **Sample size**: 1.253.328 respondents across the country	The study revealed that factors such as age, education, employment status, income (assumed to reflect expenditure level) and health insurance significantly	**Predisposing Factors**: Age, Education Level, and Employment Status **Enabling Factors**: Income Level and Health Insurance **Need Factors**:

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

Author, Year	Title	Methodology	Results	Determinants of Healthcare Utilization
			influenced the utilization of inpatient healthcare facilities.	Specific need factors like perceived health status or clinical conditions are not detailed in this study.
Sambodo (2018)	The Impact of Jamkesmas on Healthcare Utilization in Eastern Regions of Indonesia: A Propensity Score Matching Method	**Design:** Cross-sectional study **Data sources:** IFLS East 2012 **Analysis:** Propensity Score Matching (PSM) **Sample Size:** 10.887 individuals	The results indicated a positive average treatment effect for the treated group regarding outpatient utilization. Moreover, factors such as the availability of healthcare facilities, travel time, and distance to the district capital were key determinants of Jamkesmas coverage in Eastern Indonesia.	**Predisposing Factors**: Age, sex, years of education, education level, marital status, and Household Head Characteristics **Enabling Factors**: Income/Expenditure, Insurance, and Accessibility/Availability of Services **Need Factors**: Perceived Health Status
Astuti et al. (2024)	Utilization of Primary Health Care Under National Health Insurance in Samarinda Municipality, East Kalimantan Province, Indonesia'	**Design:** Cross-sectional study **Data Sources:** In-depth interview with a questionnaire **Analysis**: Chi-square and multiple logistic regression **Sample size:** 382 respondents who were National Health Insurance (NHI) members	The study revealed that both the type of NHI membership and factors such as accommodation and awareness significantly affected the extent to which participants utilized PHC facilities, with these differences attributed to varying levels of knowledge and experience.	**Predisposing Factors** Beliefs/Attitudes (Awareness) **Enabling Factors** Insurance, Access to Services, Transportation **Need Factors** Diagnosed Conditions: non-communicable disease
Astuti and Nugrohowati (2022)	Impact evaluation of subsidized health insurance programs on utilization of healthcare facilities: evidence from Indonesia	**Design:** Cross-sectional study **Data sources:** The 2007 IFLS data was used to evaluate the ASKESKIN program and the 2014 IFLS data was used for the JAMKESMAS program. **Analysis:** Propensity Score Matching (PSM) **Sample size:** 7,717 individuals were treated as beneficiaries, and between 12,275 and 21,077 individuals were used as control groups	This study indicated that, overall, ASKESKIN and JAMKESMAS had minimal influence on the utilization of healthcare services, as reflected in outpatient and inpatient visits among program beneficiaries. This suggests that holding subsidized health insurance does not automatically motivate individuals to seek care at formal health	**Predisposing Factors** Marital Status, Sex, and Education Level **Enabling Factors** Subsidized Health Insurance (ASKESKIN/JAMKESMAS), Per Capita Expenditure (Income Proxy), Accessibility, and Availability of Services. **Need Factors** Chronic Illness and Perceived Health Status.

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

Author, Year	Title	Methodology	Results	Determinants of Healthcare Utilization
			facilities. Moreover, the comparison of the average treatment effect on the treated (ATT) between ASKESKIN and JAMKESMAS revealed no significant improvement, despite efforts to enhance the program.	
Suharmiati et al (2023)	Urban-Rural Disparities in Traditional Health Service Use in Indonesia: A Cross-Sectional Study	**Design:** Cross-sectional study **Data Sources:** Indonesian Basic Health Survei 2018 **Analysis:** Binary logistic regression, chi-sqiare, collinearity tests **Sample Size:** 629.370 respondents	The study concluded that there were notable urban–rural disparities in the utilization of traditional health services in Indonesia.	**Predisposing Factors** Age, Gender, Marital Status, and Education Level. **Enabling Factors** Occupation, Wealth Status, and Availability of Services **Need Factors** The study did not explicitly categorize and analyze 'need factors' such as perceived health status, illness severity, or symptoms.

Across the twelve reviewed studies, the most frequently examined predisposing variables were age, sex, education, and marital status. Such characteristics demonstrated consistent associations with higher service use among older adults, women, and those with higher education levels, although some studies focusing on older populations observed the opposite trend.

Enabling factors were the most dominant determinants. Socioeconomic status, health insurance ownership, geographic location (urban–rural differences), and travel time to facilities were consistently associated with utilization. Higher wealth quintiles tended to seek care from private hospitals and make greater use of preventive healthcare, whereas lower-income groups relied more on primary care. Insurance ownership (especially government-run schemes like JKN) generally increased utilization but not uniformly across all groups; subsidized members still reported lower use of services than non-subsidized members. Geographic and infrastructure barriers, including rural location and long travel times, limited access to higher-level care and preventive services.

Need factors such as self-rated health, chronic illness, or other health conditions were positively associated with utilization in most studies, indicating that individuals with poorer health status were more likely to seek care. However, some studies noted that even with greater health needs, low-income groups may delay or avoid formal care due to financial or informational barriers.

Overall, the synthesis reveals persistent disparities in healthcare utilization in Indonesia despite universal health coverage initiatives. These disparities are shaped by a combination of predisposing, enabling, and need factors.

Predisposing Factors

Age, sex, marital status, and educational background consistently emerged as key predisposing factors influencing healthcare utilization in Indonesia. Across the 12 included studies, advancing age showed a positive association with higher utilization of

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

healthcare, particularly inpatient and outpatient care, reflecting greater health needs and the burden of chronic conditions. This aligns with international evidence showing that healthcare utilization rises significantly with age, especially among individuals aged 65 and above (Oh, 2024). For example, studies in Vietnam and Nigeria also report higher utilization among older adults compared to younger groups (Nguyen and Giang, 2021). These parallel findings suggest that age-related increases in health needs are a universal driver of healthcare utilization, though in Indonesia older adults in rural areas may still face barriers to access due to geographic or infrastructural limitations.

Gender differences were also evident. Women in Indonesia generally showed higher healthcare utilization than men, largely due to reproductive health needs, preventive services, and chronic conditions. This mirrors global evidence indicating that women tend to use home health care and physician services more often than men (Patel and Chauhan, 2020). However, as seen in maternal health programs both globally and in Indonesia, unpaid domestic work and cultural expectations can negatively affect women's ability to seek care (Prasad and Chattopadhyay, 2023). Such findings underscore the importance of gender-sensitive policies that address time, transportation, and childcare barriers.

Marital status further influenced healthcare utilization patterns. Married individuals in Indonesia were more likely to use health services than unmarried counterparts, consistent with international studies showing similar patterns. For example, in India, married older adults prefer private facilities for hospitalization, while widowed individuals more frequently use public healthcare services. Other research highlights that marital distress can affect utilization, with men in dissatisfying marriages more likely to seek care (Hossain *et al.*, 2023). These findings suggest that social support from a spouse or household members facilitates access, but psychosocial stressors may also shape health-seeking behavior.

Education level showed a particularly strong and consistent association with health service utilization. Individuals with higher education generally reported greater use of health services, reflecting better health literacy, awareness, and access to resources. This pattern was evident in Indonesia, where older adults with primary education were more likely to utilize primary healthcare compared to those without any formal schooling, as well as in Bangladesh where continued education after marriage increased antenatal and delivery care use (Howlader, Rahman and Rahman, 2024). Nevertheless, some Indonesian studies, such as those by (Laksono *et al.*, 2024), found that among older populations, secondary education did not always translate into higher primary care utilization, possibly reflecting differences in health perceptions or service preferences. This divergence highlights the need for targeted health literacy and outreach efforts, especially among populations whose education does not automatically lead to increased service use.

Enabling Factors

Socioeconomic status (SES), health insurance ownership, and geographic access consistently emerged as the most influential enabling factors shaping healthcare utilization patterns in Indonesia. Across the 12 included studies, populations with higher SES (characterized by greater wealth, education, and occupational status) were more likely to use private hospitals, specialist services, and preventive care, while lower SES groups relied more heavily on primary healthcare and public facilities. This aligns with international evidence indicating that individuals with higher SES tend to visit specialists, dentists, and a wider range of providers more frequently (Fekete *et al.*, 2022), whereas those with lower SES depend primarily on general practitioners and public health services due to greater health needs and affordability constraints (Rahman *et al.*, 2025). Financial hardship further influences utilization: perceived financial difficulty and lower income are associated with reduced uptake of preventive services and increased reliance on emergency or inpatient care (Kino and Kawachi, 2018).

Health insurance ownership also plays a critical role. In Indonesia, JKN membership generally increases both outpatient and inpatient healthcare utilization; however, subsidized insurance holders often report lower usage than non-subsidized members, suggesting that

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

insurance alone does not eliminate non-financial barriers. International findings similarly show that insured individuals are more likely to access health services and often prefer private facilities when coverage is available (Sisira Kumara and Samaratunge, 2020). Evidence from Ghana demonstrates that insurance coverage enhances maternal health service uptake—including antenatal care, facility-based delivery, and postnatal care (Yaya *et al.*, 2019)—mirroring patterns in Indonesia where insurance increases family planning service use (Maretalinia *et al.*, 2023). These trends suggest that while insurance improves access, its equity impact is maximized only when paired with health literacy initiatives, quality improvement, and expanded service availability.

Geographic access remains a fundamental determinant in both Indonesia and other contexts. Studies in this review highlight how long travel times, limited transportation, and uneven facility distribution restrict utilization, particularly in eastern provinces such as Papua, Maluku, and Nusa Tenggara. International evidence corroborates this, demonstrating that low facility density and greater travel distances reduce service use (Garchitorena *et al.*, 2021). Urban–rural disparities also persist globally: urban residents generally have better access, as seen in studies from Sweden and Iran (Raeesi *et al.*, 2025). Moreover, SES and geographic access interact, with lower-income individuals more severely affected by distance and transportation barriers, resulting in decreased utilization. Meso-level factors such as physician density and proximity to healthcare providers further shape access patterns (Bammert *et al.*, 2024).

Overall, the convergence of Indonesian and global evidence shows that financial protection alone is insufficient to eliminate disparities in healthcare utilization. Addressing inequities requires simultaneous improvements in geographic accessibility, infrastructure, and socioeconomic conditions. Recommended strategies include redistributing health facilities, strengthening transportation systems, expanding mobile and telehealth services, and implementing community-based programs. Strengthening public awareness and health education is also essential to ensure that expanded insurance coverage translates into actual service use (Bammert *et al.*, 2024).

Need Factors

Need factors (including self-rated health (SRH), chronic illnesses, and perceived healthcare needs) consistently influenced healthcare utilization patterns in Indonesia and globally. Across the Indonesian studies reviewed, individuals with poorer health status, particularly those reporting chronic illnesses and low SRH, were more likely to use healthcare services. This included higher frequencies of outpatient and inpatient visits, emergency department use, and self-medication. Such findings parallel international evidence showing that chronic conditions substantially increase healthcare utilization (Ma, Zheng and Huang, 2025); (Ni *et al.*, 2020). Indonesian data similarly indicate that people with chronic diseases such as hypertension and diabetes consistently exhibit higher service use. Evidence also suggests that strengthening access to primary healthcare can reduce unnecessary inpatient utilization and overall healthcare expenditure (Ma, Zheng and Huang, 2025).

SRH emerged as a strong and consistent predictor of healthcare utilization in the Indonesian studies, with poorer SRH associated with increased outpatient visits and hospital admissions. This pattern reflects global findings showing that SRH is closely linked not only to healthcare use but also to long-term health trajectories, mortality risk, and quality of life (Kim, Eunmi and Jeonghyun, 2020). Consequently, SRH serves as a practical and widely used indicator for identifying individuals at risk of both underuse and overuse of health services. Indonesian evidence further shows that individuals with greater perceived healthcare needs (often driven by chronic conditions and poorer SRH) utilize services more frequently, though low-income groups continue to face persistent access barriers. This mirrors international research demonstrating that while perceived need is strongly associated with increased utilization, unmet needs for physical assistance and activities of daily living (ADL) are linked to poorer SRH and delayed care-seeking (Tamayo-Fonseca *et al.*, 2015).

Importantly, both Indonesian and global evidence indicate that high health needs do not always translate into healthcare use. Financial constraints,

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

limited health literacy, geographical inaccessibility, and cultural beliefs frequently cause low-income populations to postpone or avoid formal care (Phillips *et al.*, 2022). In Indonesia, for example, subsidized JKN members often report lower utilization than non-subsidized members despite similar or even greater health needs—a pattern consistent with findings from the United States, where financial and structural barriers remain particularly significant (Ma, Zheng and Huang, 2025).

Implication

The findings of this review indicate that enabling factors—particularly socioeconomic status, health insurance ownership, and geographic accessibility—are the strongest determinants of healthcare utilization disparities in Indonesia, exerting greater influence than predisposing and need factors. Although characteristics such as older age, female gender, marital status, higher education, chronic illness, and poor self-rated health increase the likelihood of seeking care, these effects are consistently shaped by structural constraints including financial hardship, limited health literacy, and the unequal distribution of facilities and health professionals. Crucially, high health needs do not automatically translate into greater service use among low-income and rural populations, highlighting the limitations of financial protection when implemented without complementary support. Overall, the evidence underscores the need for policies that extend beyond expanding insurance coverage to include targeted health promotion, community-based outreach, and structural interventions aimed at improving geographic access and service quality. Such efforts are essential to ensure that individuals with the greatest health needs can obtain timely, appropriate, and equitable care.

Policy and Practice Solutions

In order to translate these findings into actionable policy, Indonesia should adopt a comprehensive strategy that integrates financial protection with structural, educational, and community-level interventions. First, expanding and strengthening primary healthcare facilities in underserved and remote regions is essential, accompanied by improved distribution of health professionals through targeted incentives, rotational placements, and telehealth-supported service delivery. Second, embedding health promotion and literacy programs within the National Health Insurance (JKN) framework—leveraging mass media, mobile applications, and community health workers—can enhance public understanding of available benefits, preventive services, and the value of early care-seeking.

Community-based outreach that partners with local leaders, schools, and religious institutions can help address stigma, cultural norms, and misinformation, especially among women and low-income groups. Improving geographic access through transportation subsidies, mobile clinics, and expanded telemedicine will further support populations in hard-to-reach areas. Finally, continuous quality-improvement initiatives in public health facilities are necessary to strengthen trust and ensure that increased coverage translates into both perceived and actual improvements in service quality. Collectively, these measures can convert financial inclusion into real, equitable healthcare utilization and help Indonesia advance toward its goal of universal health protection.

CONCLUSION

This systematic review demonstrates that despite Indonesia's significant progress in expanding financial protection through the National Health Insurance (JKN) program, substantial disparities in healthcare utilization persist across socioeconomic and geographic groups. Among the three dimensions of Andersen's Behavioral Model, enabling factors—particularly socioeconomic status, insurance ownership, and geographic accessibility—emerged as the strongest and most consistent determinants. While predisposing factors (age, sex, marital status, and educational background) and need factors (self-rated health, chronic illness, and perceived health needs) also shaped utilization patterns, their effects were often moderated or constrained by structural barriers. Notably, high health needs alone did not guarantee access to timely or appropriate care, especially among low-income and rural populations.

These findings underscore that achieving equitable healthcare utilization in Indonesia requires more than expanding

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

financial coverage. Strengthening health literacy, enhancing targeted health promotion, redistributing healthcare professionals, expanding primary care infrastructure, and developing community-based outreach are essential to translate insurance coverage into actual service use. Implementing these strategies will help bridge the persistent gaps between health needs and utilization, build confidence in the national healthcare system, and accelerate Indonesia's progress toward Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs).

The strength of this review lies in its systematic approach, guided by PRISMA standards and Andersen's Behavioral Model, which ensured both conceptual clarity and methodological rigor. Comprehensive searches across multiple databases and screening via Covidence helped minimize selection bias. However, most included studies were observational and cross-sectional, limiting causal interpretations. Moreover, variations in study design, population characteristics, and equity indicators constrained opportunities for quantitative synthesis. Finally, while the use of a custom quality appraisal framework enhanced contextual relevance, it may introduce minor subjectivity despite efforts to maintain consistency and transparency.

REFERENCES

Bammert, P. *et al*. (2024) 'The role of mesolevel characteristics of the health care system and socioeconomic factors on health care use–results of a scoping review', *International Journal for Equity in Health*, 23(1), p. 37.

Fekete, C. *et al*. (2022) 'Does the socioeconomic status predict health service utilization in persons with enhanced health care needs? Results from a population-based survey in persons with spinal cord lesions from Switzerland', *International Journal for Equity in Health*, 21(1), p. 94.

Garchitorena, A. *et al*. (2021) 'Geographic barriers to achieving universal health coverage: evidence from rural Madagascar', *Health Policy and Planning*, 36(10), pp. 1659–1670.

Hendrartini, J. and Aristianti, V. (2025) 'Dentists Distribution and Dental Service Utilization in Indonesia's National Health Insurance Program', *Journal of International Dental and Medical Research*, 18(1), pp. 175–181.

Hossain, B. *et al*. (2023) 'Differentials in private and public healthcare service utilization in later life: do gender and marital status have any association?', *Journal of Women & Aging*, 35(2), pp. 183–193.

Howlader, S., Rahman, M. A. and Rahman, M. M. (2024) 'Continuation of education after marriage and its relationship with professional maternal healthcare utilization among young adult women in Bangladesh', *PloS one*, 19(12), p. e0316117.

Kim, K. Y., Eunmi, L. E. E. and Jeonghyun, C. H. O. (2020) 'Factors affecting healthcare utilization among patients with single and multiple chronic diseases', *Iranian journal of public health*, 49(12), p. 2367.

Kino, S. and Kawachi, I. (2018) 'The impact of ACA Medicaid expansion on socioeconomic inequality in health care services utilization', *PLoS One*, 13(12), p. e0209935.

Laksono, A. D. *et al*. (2024) 'Traditional Health Services Utilization in Disadvantage Areas in Indonesia', *International Journal on Advanced Science, Engineering & Information Technology*, 14(1).

Ma, Y., Zheng, W. and Huang, Z. (2025) 'Navigating healthcare for older adults after a chronic illness diagnosis: Evidence from China', *The Journal of the Economics of Ageing*, p. 100568.

Maretalinia, M. *et al*. (2023) 'Factors influencing the utilization of the Modern Family Planning (MFP) method under the National Health Insurance in Indonesia: An analysis of the 2017 IDHS', *Public Health of Indonesia*, 9(2), pp. 47–56.

Muharram, F. R. *et al*. (2024) 'Adequacy and distribution of the health workforce in Indonesia', *WHO South-East Asia journal of public health*, 13(2), pp. 45–55.

Mulyanto, J., Kringos, D. S. and Kunst, A. E. (2019a) 'Socioeconomic inequalities in healthcare utilisation in Indonesia: a comprehensive survey-based overview', *BMJ open*, 9(7), p. e026164.

Mulyanto, J., Kringos, D. S. and Kunst, A. E. (2019b) 'The evolution of income-related inequalities in healthcare utilisation in Indonesia, 1993–2014', *PLoS One*, 14(6), p. e0218519.

Mulyanto, J., Kunst, A. E. and Kringos, D. S. (2019) 'Geographical inequalities in healthcare utilisation and the contribution

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026

of compositional factors: A multilevel analysis of 497 districts in Indonesia', *Health & Place*, 60, p. 102236.
Nguyen, T. A. and Giang, L. T. (2021) 'Factors associated with regional disparity in utilization of healthcare services among the Vietnamese older people', *Journal of Population and Social Studies [JPSS]*, 29, pp. 15–31.
Ni, Y. *et al*. (2020) 'Patient-perceived service needs and health care utilization in people with type 2 diabetes: A multicenter cross-sectional study', *Medicine*, 99(21), p. e20322.
Novianti, A. E. *et al*. (2023) 'Addressing Health Equity through E-Patient Solutions in West Sulawesi', *Universal Journal of Public Health*, 11(6), pp. 783–791.
Novita, R. and Hafidz, F. (2022) 'Examining Equity in Healthcare Services Among Beneficiaries of The National Health Insurance Program in Indonesia: Evidence from National Survey.', *Malaysian Journal of Medicine & Health Sciences*, 18.
Oh, B.-K. (2024) 'Retirement and healthcare utilization: Evidence from pension eligibility ages in South Korea', *The Journal of the Economics of Ageing*, 27, p. 100498.
Patel, R. and Chauhan, S. (2020) 'Gender differential in health care utilisation in India', *Clinical Epidemiology and Global Health*, 8(2), pp. 526–530.
Phillips, M. S. *et al*. (2022) 'Mental health service utilization among medical students with a perceived need for care', *Academic Psychiatry*, 46(2), pp. 223–227.
Prasad, A. B. and Chattopadhyay, A. (2023) 'Men's Role in Unpaid Activities and Maternal Health Care in India: How Far Women Get Support from Men?', in *Health and Nutrition of Women and Children in Empowered Action Group States of India*. Routledge India, pp. 229–250.
Raeesi, A. *et al*. (2025) 'Empowering access: unveiling an overall composite spatial accessibility index to healthcare services in Southeastern Iran', *International Journal for Equity in Health*, 24(1), p. 35.
Rahman, M. *et al*. (2025) 'Socioeconomic inequalities in disability prevalence and health service use in Bangladesh', *Scientific Reports*, 15(1), p. 23363.
Rahmawati, T. and Hsieh, H.-M. (2024) 'Appraisal of universal health insurance and maternal health services utilization: pre-and post-context of the Jaminan Kesehatan Nasional implementation in Indonesia', *Frontiers in Public Health*, 12, p. 1301421.
Sisira Kumara, A. and Samaratunge, R. (2020) 'Health insurance ownership and its impact on healthcare utilization: Evidence from an emerging market economy with a free healthcare policy', *International Journal of Social Economics*, 47(2), pp. 244–267.
Sri Wahyuni, I. *et al*. (2024) 'Spatial Durbin Model on the Utilization of Delivery at Health Facilities: A 2017 Indonesian Demographic and Health Survey Analysis'.
Swarjana, I. K. *et al*. (2020) 'Disparities in utilization of maternal health services in the rural areas of indonesia: An analysis among provinces with low, middle, and high poverty rates', *Journal of Public Health and Development*, 18(3), pp. 49–63.
Tamayo-Fonseca, N. *et al*. (2015) 'Self-rated health and hospital services use in the Spanish National Health System: a longitudinal study', *BMC health services research*, 15(1), p. 492.
Yaya, S. *et al*. (2019) 'Maternal healthcare insurance ownership and service utilisation in Ghana: analysis of Ghana demographic and health survey', *Plos one*, 14(4), p. e0214841.

Received: 21-10-2025, Accepted: 26-11-2025, Published Online: 09-01-2026